AMENDMENTS IN THE CLAIMS:

1.-31. (Canceled)

32. (Currently amended) A recording medium according to claim ~~[[30]]~~ 53, wherein the recording medium has a region, in which an identification code for selecting the at least one third recording parameter is recorded.

33-39. (Canceled)

40. (Currently amended) A recording method comprising the steps of:

(a) generating a plurality of pulse sequences for recording data to a recording medium corresponding to a plurality of linear velocities of rotation of the recording medium in the range va to vb;

va being the lowest linear velocity;

vb being the highest linear velocity,

wherein each one of said plurality of pulse sequences having a starting pulse and a terminating pulse, the starting pulse being provided at a beginning thereof and the terminating pulse being provided at the end thereof;

wherein the step (a) comprises the steps of:

(a-1) providing, for each of the recording parameters, corresponding recording parameter values PCv1 and PCv2 for linear velocities v1 and v2 respectively, wherein v1 and v2 are linear velocities satisfying the relationship va ≤ v1 < v2 ≤ vb;

(a-2) setting, for each of the recording parameters, the corresponding recording parameter values PCv1 and PCv2;

(a-3) performing learning using said linear velocity v1 and the corresponding recording parameter value PCv1 and optimizing, for said linear velocity v1, to obtain a corresponding optimum recording parameter value PMv1 for each of the recording parameters;

(a-4) performing learning using said linear velocity v2 and the corresponding

recording parameter value PCv2 and optimizing, for said linear velocity v2, to obtain a corresponding optimum recording parameter value PMv2 for each of the recording parameters;

(a-5) obtaining recording parameters corresponding to an arbitrary linear velocity v by using a corresponding recording parameter approximation function h(v) obtained based on PMv1 and PMv2;

(b) while rotating a recording medium with a linear velocity v selected from the plurality of linear velocities in the range va to vb, forming at least one of a recording mark and a space by irradiating the recording medium with a pulse sequence selected from the plurality of pulse sequences, wherein the pulse sequence is determined by a set of recording parameters calculated from the corresponding recording parameter approximation function h(v).

41. (Previously presented) A recording method according to claim 40, wherein:

the linear velocity v1 is the linear velocity va and the linear velocity v2 is the linear velocity vb.

42. (Previously presented) A recording method according to claim 40, wherein step (a-1) further comprises:

providing, for each of the recording parameters, corresponding recording parameter value PCv3 for linear velocity v3, the linear velocity va, the linear velocity vb, the linear velocity v1, the linear velocity v2, and the linear velocity v3 have a relationship $va \le v1 < v2 < v3 \le vb$.

43. (Previously presented) A recording method according to claim 40, wherein step (a-1) further comprises:

providing, for each of the recording parameters corresponding recording parameter value PCv3 for linear velocity v3,

wherein the linear velocity v1 is the linear velocity va, the linear velocity v2 is the linear velocity vb, and the linear velocity v3 is the linear velocity vc; and

the linear velocity va, the linear velocity vb, and the linear velocity vc have a relationship vc=(va+vb)/2.

44. (Previously presented) A recording method according to claim 40, wherein h(v) is a linear function or a quadratic function.

45. (Previously presented) A recording method according to claim 40, wherein:

the optimum recording parameter PMv1 corresponds to the linear velocity v1 and the optimum recording parameter PMv2 corresponds to the linear velocity v2; and

the following relationship is satisfied:

$va \leq v1 < v2 \leq vb$,

$h(v) = \beta \cdot (v-va)+PMv1$, and

$\beta = (PMv2-PMv1)/(v2-v1)$.

46. (Previously presented) A recording method according to claim 40, wherein the recording parameter values PCv1 and PCv2 provided in step (a-1) are selected based on identification codes recorded on the recording medium.

47. (Currently amended) A recording apparatus, comprising:

means for generating a plurality of pulse sequences <u>for recording data to a recording medium</u> corresponding to a plurality of linear velocities <u>of rotation of the recording medium</u> in the range va to vb;

va being the lowest linear velocity;

vb being the highest linear velocity,

wherein each one of said plurality of pulse sequences having a starting pulse and a terminating pulse, the starting pulse being provided at a beginning thereof and the terminating pulse being provided at the end thereof;

wherein the means for generating the plurality of pulse sequences are operable to:

provide, for each of the recording parameters, corresponding recording

parameter values PCv1 and PCv2 for linear velocities v1 and v2 respectively, wherein v1 and v2 are linear velocities satisfying the relationship va ≤ v1 < v2 ≤ vb;

set, for each of the recording parameters, the corresponding recording parameter values PCv1 and PCv2;

perform learning using said linear velocity v1 and the corresponding recording parameter value PCv1 and optimizing, for said linear velocity v1, to obtain a corresponding optimum recording parameter value PMv1 for each of the recording parameters;

perform learning using said linear velocity v2 and the corresponding recording parameter value PCv2 and optimizing, for said linear velocity v2, to obtain a corresponding optimum recording parameter value PMv2 for each of the recording parameters;

obtain recording parameters corresponding to an arbitrary linear velocity v by using a corresponding recording parameter approximation function h(v) obtained based on PMv1 and PMv2;

means for, while rotating a recording medium with a linear velocity v selected from the plurality of linear velocities in the range va to vb, forming at least one of a recording mark and a space by irradiating the recording medium with a pulse sequence selected from the plurality of pulse sequences,

wherein the pulse sequence is determined by a set of recording parameters calculated from the corresponding recording parameter approximation function h(v).

48. (Previously presented) A recording apparatus according to claim 47, wherein:

the linear velocity v1 is the linear velocity va and the linear velocity v2 is the linear velocity vb.

49. (Previously presented) A recording apparatus according to claim 47, wherein:

the recording parameter values PCv1 and PCv2, corresponding to linear velocities v1 and v2 respectively, are recording parameters values previously recorded on the recording medium; and

the linear velocity va, the linear velocity vb, the linear velocity v1, and the linear velocity v2 have a relationship va ≤ v1 < v2 ≤ vb.

50. (Previously presented) A recording apparatus according to claim 47, wherein:

the recording parameter values PCv1 and PCv2, corresponding to linear velocities v1 and v2 respectively, are recording parameters values previously recorded on the recording medium; and

the linear velocity v1 is the linear velocity va and the linear velocity v2 is the linear velocity vb.

51. (Previously presented) A recording apparatus according to claim 47, wherein:

the recording parameter values PCv1 and PCv2, corresponding to linear velocities v1 and v2 respectively, are recording parameters values previously recorded on the recording medium; and

h(v) is a linear function or a quadratic function.

52. (Previously presented) A recording apparatus according to claim 47, wherein:

the recording parameter values PCv1 and PCv2, corresponding to linear velocities v1 and v2 respectively, are recording parameters values previously recorded on the recording medium;

the optimum recording parameter PMv1 corresponds to the linear velocity v1 and the optimum recording parameter PMv2 corresponds to the linear velocity v2; and

the following relationship is satisfied:

$va \leq v1 < v2 \leq vb$,

$h(v) = \beta \cdot (v-va)+PMv1$, and

$\beta = (PMv2-PMv1)/(v2-v1)$.

53. (New) A recording medium, comprising:

a region in which at least one recording parameter value PCva is recorded, wherein a recording parameter approximation function f(v) corresponding to a plurality

of linear velocities of rotation of the recording medium is determined based on the at least one recording parameter value PCva recorded on the recording medium;

a test recording region in which at least one optimum recording parameter value PMv1 corresponding to at least one linear velocity of the plurality of linear velocities is measured, wherein a recording parameter approximation function g(v) is determined based on the at least one optimum recording parameter value PMv1 and the recording parameter approximation function f(v); and

an information recording region in which at least one of a recording mark and a space is formed by, while rotating the recording medium with a linear velocity selected from the plurality of linear velocities, irradiating the recording medium with a pulse sequence selected from a plurality of pulse sequences for recording data to a recording medium, the plurality of pulse sequences corresponding to the plurality of linear velocities, wherein the pulse sequence is determined by recording parameter approximation function g(v),

wherein the recording parameter approximation function f(v), the optimum recording parameter value PMv1, and the recording parameter approximation function g(v) have a relationship represented by:

$g(v)=f(v)+PMv1-f(v1)+Adj(v)$

where:

v represents the plurality of linear velocities;

v1 represents a linear velocity corresponding to one of the at least one third recording parameter; and

Adj(v) represents an adjustment value corresponding to the plurality of linear velocities.